

SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 INTRODUCTION

The Contractor shall furnish the necessary personnel, materials, equipment, services, and training to continue operating, maintaining, implementing, expanding, and enhancing the Enterprise Call Center (ECC) and related telephone customer service systems for the United States Patent and Trademark Office (USPTO), Customer Information Services (CIS) as outlined in this statement of work. This effort shall be accomplished by individual task orders issued by CIS in accordance with the PTO Office of Procurement task order management procedures.

C.2 BACKGROUND

On November 7, 1996, the PTO Executive Council accepted for implementation a recommendation by Booz-Allen & Hamilton (See report titled *Telecommunication Operational Alternatives*) to expand the original General Information Services (GIS) call center and infrastructure to include telephone customer service points throughout the PTO. Booz-Allen recommended that PTO consolidate its physically separate customer call centers and install an Enterprise Call Center (ECC) using state-of-the-art call center technology including Automatic Call Distribution (ACD), Interactive Voice Response (IVR), Computer-Telephony Integration (CTI) and fax-on-demand.

Call Center and Marketing Services (CCMS), an office of the Customer Information Services (CIS), is implementing the Booz Allen recommendations, for PTO. General Information Services (GIS), a program reporting to CCMS, is PTO's largest provider of call center services to external customers. CIS funded the largest portion of the ECC project. The Office of Administrative Services (OAS) and other offices with customer service environments provided the remainder of the funding for the ECC infrastructure. Requirements studies were performed for the Trademarks Assistance Center (TAC), Patent Assistance Center (PAC)/Petitions and the Chief Information Officer (CIO) Help Desk as each organization considered participating in the enterprise system. TAC, PAC/Petitions and the CIO Help Desk were requested to provide funding for their individual agent stations, management reporting software, communications equipment to connect to the central ECC, training, and costs to modify CIS's Call Center Information System (CCIS) if required. CCIS provides call tracking and order entry capability.

The ECC is being implemented in phases. During Phase 1, the ECC infrastructure was installed. The ECC infrastructure includes a Rockwell Automatic Call Distributor (ACD) and Periphonics Interactive Voice Response (IVR). The ACD automatically manages call flows and creates management information. The IVR provides telephone customer access to information and order capability, 7 days a week, 24-hours a day.

During Phase 1, the following PTO organizations were added to the ECC:

- General Information Services
- Patent Assistance Center
- Trademark Assistance Center
- CIO Help Desk
- Call Center and Marketing Services
- Systems Integration, Inc. (backup call center and transcriptions)

In follow-on phases, other PTO telephone customer service organizations will be added to the ECC and the ECC infrastructure will be enhanced to include Internet access to the IVR applications, Internet, E-mail, Periphonics' Computer -Telephony Integration (CTI), fax-on-demand capability, and other new technologies.

C.3 SCOPE

The Contractor shall continue implementing the ECC and telephony applications for other PTO areas with telephone customer service operations. The Contractor shall utilize state-of-the-art telephony and computer technologies to design, develop, integrate, and implement telephone customer service systems, which will provide PTO's customers with easy, convenient, and speedy access to PTO-provided information and services.

- 3.1 The needs and requirements for all projects and tasks performed under this contract shall be defined by the government.
- 3.2 The Contractor shall plan and implement follow-on phases of the ECC. During follow-on phases, customer access shall be expanded to include Internet and fax-on-demand services, CCIS shall be enhanced, and additional technologies shall be implemented including Computer-Telephony Integration (CTI) and fax-on-demand.
- 3.3 During the follow-on phases, the Contractor shall follow PTO's Life Cycle Management (LCM) and Technical Standards Guidelines (TSG) and will complete all reviews and documentation required by the Technical Review Board (TRB) for ECC components interfacing with PTOnet or the Enterprise PC Workstations. The Contractor shall coordinate with PTO and other contractors to complete the required LCM documentation, including Concept Briefings, Project Schedules, Requirements Statements, Requirements Specifications, Logical Design Documents, Technical Design Documents, QA Plans, Configuration Management Plans, Requirements Traceability Matrix, Economic Feasibility, Test Document, Operational Support Plans, etc.
- 3.4 The Contractor shall evaluate other areas of telephone customer service operations within PTO which are presently not being addressed and design, develop, integrate, and implement telephone customer service systems that provide customers with improved access to PTO-provided information and services in those areas in accordance with the spirit of Booz Allen.
- 3.5 The Contractor shall perform as a technical architect/systems integrator to ensure that the various telephone system components are properly integrated into a total systems solution, and to ensure that there are no missing or incompatible pieces. The Contractor shall produce studies, analysis, system designs, and documentation as tasked.
- 3.6 The overall business objective shall be to create a totally integrated telephone customer service environment that advances PTO's customer service mission by providing increased self-service options for telephone customers, reducing customer response time, increasing staff productivity, reducing the costs of customer support, reducing training time, providing more consistent service, and increasing customer satisfaction.
- 3.7 The Contractor shall provide experience and expertise in the full range of complex technologies required to automate PTO's telephone customer service environment: i.e., WITS telephony services (ISDN, ANI, DNIS, etc.), Rockwell Automatic Call Distributors (ACD), Rockwell Remote Extend Centers, Periphonics Interactive Voice Response (IVR), Periphonics Computer Telephony Integration (CTI), Octel voice mail, Periphonics fax processing, Periphonics PeriWeb, artificial intelligence/knowledge bases, client/server programming using Visual Basic on Pentium

PCs running Windows NT Workstation 4.0, Oracle 7 database on a HP-9000, Microsoft Windows NT Server 4.0-based networking, etc. The Contractor shall have implemented an Enterprise Call Center with a central site and four or more remote sites. The Enterprise Call Center shall have supported at least 180 agents and 1.5 million calls per year.

- 3.8 The Contractor shall provide equipment, materials, and supplies as tasked to perform the services of this Contract.
- 3.9 The Contractor shall provide office space, renovations, equipment, and furniture as tasked to perform the services of this Contract.
- 3.10 Support services shall be provided on a task order basis. The Government will issue task orders against this Contract, identifying the specific services requested. The Contractor will respond to task orders with a work plan, identifying services to be provided, labor categories, labor hours required to complete the task(s), work schedule, and deliverables. In this initiative, the Contractor shall propose a broad range of labor categories to support a potentially broad range of tasks.

C.4 TECHNICAL APPROACH

The Contractor shall assist CCMS in continuing the implementation of the ECC and related telephone customer service systems by preparing documentation; designing; developing, and testing software; integrating COTS; migrating data from existing systems; supporting the transition to production; and maintaining, enhancing, and expanding the production system. The Contractor shall follow PTO's Life Cycle Management, and Technical Standards Guidelines for system components interfacing to PTOnet and/or the Enterprise PC Workstations. The ECC and related telephone customer service systems shall be designed and developed using the framework of standards, services, interfaces, data formats, and protocols defined in the design documents and/or as defined by industry standards. Periodic technical and management reviews shall be held between the Contractor and the PTO. The ECC and related telephone customer service systems shall be implemented so as to ensure that the systems can be properly maintained once operational. Implementation will not begin until the project plans, requirements, and design are accepted by the PTO Project Manager.

4.1 Review and Coordination

To ensure that the ECC and related telephone customer service systems comply with the technical standards of the PTO and can be interfaced with other systems, the requirements and design shall be reviewed by PTO. PTO will appoint a Development Manager who will work with the Contractor's Project Manager to ensure that the standard Life Cycle Management (LCM) guidelines are followed for system components interfacing to PTOnet and/or the Enterprise PC Workstations. Periodic technical and management reviews shall be held.

4.2 Standards and Guidelines

Life Cycle Management for Automated Information Systems Manual, PTO, July 1995 (PTO LCM)
CIO Technical Systems Guidelines (CIO-TSG)
Current and Planned PTO Information Technology Infrastructure
Department of Commerce Automated Information Systems Security
Program Handbook
GAO Guidelines Pertaining to the CFO ACT, Including, Evaluating Internal Controls in Computer-based Systems
OMB Circulars, including, but not limited to: A-123, A-127, A-130, and OMB Bulletin No. 90-08
PTO Technical Reference Model
PTO Data Administration Division Guidance (Data Element Naming Standards)

4.3 Tasks/Technical Requirements

4.3.1 Project Management

Throughout the project life cycle effort, the Contractor shall provide project management support for reviewing and providing comments on completed studies, analyses, documentation, and activities.

4.3.2 Status Reports

The Contractor shall prepare monthly and quarterly status reports. The status reports shall describe tasking accomplished and provide the level of effort expended by task and subtask (i.e., hours used to date). This information will be used by PTO to monitor contractor performance. The Contractor shall keep the Contracting Officer's Technical Representative (COTR) informed about all project activities on a daily basis.

C.5 REQUIREMENTS

- 5.1 The Contractor shall operate, maintain, and administer the Automatic Call Distributor (ACD) system installed in Phase 1. The Contractor shall provide support services as requested to oversee the maintenance activities performed by the ACD vendor, review the ACD hardware/software configuration, recommend changes/enhancements, process change orders, setup new ACD groups, modify system parameters (call routing algorithms, overflow rules, etc.), coordinate training, etc.
- 5.2 The Contractor shall operate and administer the Interactive Voice Response (IVR) system installed in Phase 1. The Contractor shall plan, design and implement new IVR applications as identified which advance PTO's telephone customer access to products and services. The Contractor shall provide support services as requested to oversee the maintenance activities performed by the IVR vendor, review the IVR hardware/software configuration, recommend changes/enhancements, process change orders, coordinate training, etc.
- 5.3 The Contractor shall add other PTO telephone customer service organizations to the ECC as tasked, which may include, but not be limited to, the Office of Petitions, PCT, Assignments, Certifications, Human Resources, Finance, and OEIP. The Contractor shall: 1) perform a Requirements Analysis, if required, 2) identify changes to the ECC hardware/software configuration, 3) process change order(s) with the ACD and/or IVR/CTI vendors, 4) coordinate facilities work if required, 5) coordinate new telecommunications circuit installation if required, 6) schedule equipment installation, 7) coordinate equipment installation, 8) coordinate training, 9) coordinate testing, and 10) manage the cut over.
- 5.4 The Contractor shall provide on-going systems administration and maintenance support for the ECC. The Contractor shall staff and operate a service desk with hours necessary to meet the ECC customer's needs. Systems maintenance support, via the service desk, shall include responding to calls for service from GIS, PAC, TAC, CIO Help Desk, CCMS, and other call centers added to the ECC; fixing problems; and coordinating remote and on-site support from the ACD and/or IVR vendor's support centers and field service personnel, as required. The Contractor's Systems Administrators support shall include day-to-day monitoring of system activities, analysis of system utilization and resources, capacity planning, performance tuning, coordination of vendor upgrades/fixes to the system, adding/deleting users from the system, generation of system reports, etc. Summary Data on the Service Desk activities and the operation of the system shall be reported to the COTR on a monthly basis.
- 5.5 The Contractor shall continue to maintain and enhance the Call Center Information System (CCIS). The Contractor shall modify CCIS for other telephone customer service operations as tasked. The Contractor shall continue enhancing CCIS by adding new functionality as tasked. The Contractor shall provide on-going systems administration and maintenance for CCIS. The

Contractor shall upgrade/convert CCIS to remain compatible with any changes to the PTONet and Enterprise PC Workstation hardware and operating system environments.

- 5.6 The Contractor shall develop new IVR telephony applications for PTO telephone customer service organizations participating in the ECC. The Contractor shall meet with personnel from the PTO organization to become familiar with goals, objectives, and critical success factors. The Contractor shall become familiar with the PTO organization's environment through review of project documentation, including missions, organizations, and personnel; functions; requirements; plans; policies; data processing environments; applications; and information security problems. The Contractor shall follow industry life cycle management, PTO's Technical Standards Guidelines, and technical review process in developing new IVR telephony applications.
- 5.7 The Contractor shall plan, design, and implement Computer-Telephony Integration (CTI) capabilities for the ECC to provide "screen pops" and other integrated voice-data functions. This includes using Automatic Number Identification (ANI) from the telephone network to identify the caller and using CTI, Visual Basic, and Oracle software on the Customer Service Representative's PC workstations to search a customer database, retrieve the caller's record (if any), and present the caller's customer record and voice call to the agent. The Contractor shall be required to coordinate closely with CIO organizations responsible for providing ECC access to and use of PTONet resources. The Contractor shall be required to develop a project implementation plan that includes completion of CIO's LCM review and documentation process.
- 5.8 The Contractor shall plan, design, and implement an Internet interfaced e-mail response system and other Internet access capabilities for the ECC to provide customers with Internet access to IVR telephony applications. Web access will be provided by Periphonic's PeriWeb product. PeriWeb allows customers to access voice applications developed for the IVR (e.g., the Automated Message System and Fax-on-demand) using their Internet browser software. The work to be completed includes designing and developing an Internet page to be integrated into PTO's existing Internet Home Page, with the PTO Webmaster, and integrating the PeriWeb software with the existing PTO Internet Home Page site software. The Contractor shall develop new Internet applications as tasked such as providing e-mail access for customer support, accepting customer questions through the Internet, and distributing customer service communications. The Contractor shall be required to coordinate closely with CIO organizations responsible for the Home Page site and with the PTO Webmaster. The Contractor shall be required to develop a project implementation plan that includes completion of CIO's LCM review and documentation process.
- 5.9 The Contractor shall plan, design, and implement fax-on-demand capabilities for the ECC to provide automated 24-hour access to PTO documents and forms using a touch-tone telephone. The work to be completed includes performing an analysis to identify the documents to be made available through fax-on-demand, identifying the amount of required on-line IVR storage, and converting the documents to a standard electronic format. Once the requirements have been identified and documented, an IVR fax-on-demand application shall be developed using Periphonic's PeriProducer software and the fax-on-demand capabilities of the Periphonics IVR. The Contractor shall be required to coordinate closely with CIO organizations responsible for providing fax-on-demand capabilities for PTONet. There is an on-going CIO project to provide fax-on-demand capabilities from PC workstations for internal PTO personnel. The Contractor shall be required to develop a project implementation plan that includes completion of industry-standard life cycle management review and documentation processes.
- 5.10 The Contractor shall plan, design, and implement knowledge-based capabilities for the ECC to provide Customer Service Representatives with access to answers to common questions and solutions to common problems. The system should guide the Customer Service Representative to already resolved problems stored in a knowledge base, and answers to informational questions stored in documents. The Customer Service Representative should be able to enter questions/problems in free text form, or using boolean operators, and the system should prompt the Customer Service Representative through a series of questions until the right answer/solution is found. The Contractor shall be required to coordinate closely with CIO organizations

responsible for knowledge-based systems on Enterprise PC Workstations. The Contractor shall be required to develop a project implementation plan that includes completion of CIO's LCM review and documentation process.

- 5.11 The contractor shall provide support for the following USPTO activities:
- The migration of Enterprise Contact Center (ECC) 2.0 to ECC 3.0 and decommissioning ECC 2.0
 - The integration and support for the recently selected Customer Relationship Management (CRM) package
 - The integration and support for the recently selected Nortel PBX
 - The relocation of ECC to the new USPTO campus at Carlyle in Alexandria, VA
 - The complete support to USPTO's ECC business centers located at both Carlyle and Crystal City, VA, as needed,
 - The expertise to research and incorporate new technologies into the existing ECC infrastructure. Recent technologies included VoIP, Speech Recognition and Synthesizer.
- 5.12 The Contractor shall assist USPTO in researching and incorporating new computer and telephony technologies into the existing ECC infrastructure. These new technologies cannot be identified at this time. The Contractor shall continuously review the technical literature and become familiar with new products as they are introduced into the marketplace. The Contractor shall assess the feasibility and determine the cost/benefits of integrating the new technologies into the CIS customer service environment as tasked. Wherever possible, the Contractor shall protect the PTO's existing investment in current technologies while integrating new technologies to develop a total solution.
- 5.13 The Contractor shall review existing telephone customer service operations within PTO to identify other areas of automation that are presently not being addressed. These shall include, but not be limited to: access to on-line reference material (e.g., PALM/TRAM), additional training required, additional resources, and the setup of test workstations to demonstrate feasibility of enhanced Customer Service Representative capabilities.
- 5.14 The Contractor shall provide support in developing presentations and demonstrations for management.
- 5.15 The Contractor shall supply hardware, software, and materials as tasked in support of the above projects. This shall include specialized services such as professional voice talents and professional recording studios. This shall include vendor recommended software upgrades and PTO-required software upgrades (e.g., to meet PTO/CIS/CIO security standards and Year 2000 compliance).
- 5.16 The Contractor shall provide training services to PTO personnel and supply vendor provided training as tasked in support of the above projects.
- 5.17 The Contractor shall travel to vendor facilities, trade conferences, other PTO/agency offices as required in support of the above projects.
- 5.18 The contractor shall supply all information and data resulting from product evaluation and design phases, with recommendations as appropriate, of tasks and projects to the government. Final design and product decisions will be made by the government.